

ATTACHMENT 44 – EXCERPTS OF ENBRIDGE FACILITY RESPONSE PLAN CHICAGO REGION 2010

**Emergency Response –
Book 7**



**Chicago (# 867)
Region Specific
Operating and Maintenance
Procedures**

Do not combine with the Corporate O&MP Book 7



Regional Specific

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Region Specific



REVISION RECORD

Use this Revision Record to document the insertion of all revisions. After inserting a revision into your manual, enter the date inserted and your signature. Discard old pages. Detailed supporting documents (Revision Request Form) for each of the revisions are retained in the Superior Region Office.

Revision	Date Requested	Date Inserted	Signature
01		6-5-09	√
02		4/10/2010	X
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Qualified Individual(s)

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CHICAGO REGION RESPONSE ZONE

The Enbridge Liquids Pipeline System (Lakehead System) consists of four response zones. These response zones represent the regional boundaries designated in the normal operating structure. The response zones include:

- Superior Region
- **Chicago Region**
- Cushing Region
- Enbridge Pipelines North Dakota

The Chicago Region response zone includes eleven pipelines (Lines 6A, 13, 14, 61, 62, 64, 6B, 5, 10, 17, and Mustang) and three terminal lines (Lines TL 1, GFHT 2 and GFHT 3) that transport crude oil, natural gas liquids Wisconsin, Illinois, Indiana, Michigan and New York. Line 13 transports diluent across Illinois, Wisconsin, Minnesota and the North Dakota systems. This section of response zone includes:

- Approximately 2,108 miles of pipeline, with pipe diameters ranging from 12 to 42 inches;
- 42 Pump Stations located along the pipe;
- The Mustang pipeline segment for which Enbridge has operations, maintenance, repair and emergency response responsibility includes the Lockport Metering Station and the portion of the Mustang 24" pipeline system from Lockport, Illinois to Interstate 74;



- Line 17 – Enbridge operates the 88 mile pipeline segment beginning in Stockbridge, Michigan and ending in Oregon, Ohio. The first 35 miles of pipeline, from Stockbridge, Michigan to Freedom Junction, Michigan was constructed in 1998 and is owned by Enbridge. The remaining 53 mile segment runs from Freedom Junction, Michigan to Oregon, Ohio (MP is leased from Wolverine Pipeline). Per the established lease agreement, Enbridge is responsible for all operations, maintenance and emergency response associated with this line segment (as if we were the owner); however, Wolverine retains ownership.
- The Chicago system also includes 25 tanks (11 tanks at Griffith; 9 tanks at Hartsdale; 3 tanks at Stockbridge, 2 tanks at Manhattan). Breakout tanks are located at Griffith, IN (2.84 million barrels storage capacity), Hartsdale, IN (846,000 barrels storage capacity) Stockbridge, MI (440,000 barrels storage capacity), and two diluent tanks at Manhattan (511,000 barrels storage capacity).

Counties included in the Chicago Region response zone are:

Wisconsin	Illinois	Indiana	Michigan	New York
Rusk	McHenry	Lake	Crawford	Erie
Chippewa	Kane	Porter	Ogemaw	
Clark	Cook	LaPorte	Arenac	
Marathon	Dupage	St. Joseph	Bay	
Marathon	Kendall		Lapeer	
Adams	Will		St. Claire	
Adams	Kankakee		Berrion	
Columbia	Ford		Cass	
Dane	Livingston		St. Joseph	
Jefferson	Champaign		Kalamazoo	
Washburn	Piatt		Calhoun	
			Livingston	
			Oakland	
			Tuscola	
			Saginaw	
			Oscoda	
			Macomb	
			Ingham	
			Jackson	
			Washtenaw	



This response zone includes the following pipelines:

Line	Pipeline Sections	Begin Stationing	End Stationing	Miles	Pipeline Diameter	Product
5	Lewiston Pump Station to Sarnia, Ontario	2,378,371	3,364,529	186.77	30"	Crude Oil & Natural Gas Liquids
6A	Hwy 8 Ladysmith, WI to Mokena, IL	513,368	2,457,347	368.2	34"	Crude Oil & Natural Gas Liquids
6B	Griffith, IN to Sarnia, Ontario	0	1,509,516	285.9	30"	Crude Oil
10	Westover, Ontario to Grand Island, NY	0	3,484	.7	12"	Crude Oil
10	Grand Island, NY to East Niagara, NY	3,484	29,409	4.9	20"	Crude Oil
10	East Niagara, NY to Kiantone, NY Take-Off	29,409	119,975	17.3	12"	Crude Oil
13	Streator, IL to Manhattan, IL	0	237,710	45.02	20"	Diluent
13	Manhattan, IL to Delevan, WI	0	889,310	168.43	20"	Diluent
13	Delevan, WI to Ladysmith, WI	528,000	1,216,611	230.42	20"	Diluent
14	Hwy 8 Ladysmith, WI to Mokena, IL	512,719	2,434,861	364.0	24"	Crude Oil
17	Stockbridge, MI to Freedom Junction, MI	0	186,089	35.3	16"	Crude Oil
17	Freedom Junction, MI to Toledo, OH	0	279,047	52.9	16"	Crude Oil
61	Ladysmith, WI to Delevan, WI	523,170	1,703,457	223.54	42"	Crude Oil
61	Delevan, WI to LaSalle Livingston County Line	0	467,030	88.45	42"	Crude Oil
62*	IN State Line to Hartsdale, IL	363,296	398,336	6.5	22"	Crude Oil
64	Mokena, IL to Griffith, IN	2,406,091	2,543,685	26.1	24"	Crude Oil
TL1	Griffith, IN to Hartsdale, IN	0	3,171	.6	34"	Crude Oil
GFHT 2	Griffith, IN to Hartsdale, IN	0	4,090	.8	36"	Crude Oil
GFHT 3	Griffith, IN to Hartsdale, IN	0	4,128	.8	36"	Crude Oil
Mustang	Lockport Metering Station, IL to North of Interstate 74	0	10,001	1.9	18"	Crude Oil

* Stationing used is not As-Built- Begins at zero in Flanagan

Company/Co-Op Equipment Lists



ENBRIDGE EMERGENCY RESPONSE EQUIPMENT

As required in the Federal Response Framework and Area Contingency Plans, Enbridge owns and maintains extensive emergency response equipment throughout its liquid pipeline systems. This equipment is located at all area office locations as well as other strategic locations along the system to ensure a prompt containment and recovery response in the event of a pipeline release. It is the responsibility of each Area Supervisor/ Maintenance Team Leader to ensure that the equipment is inventoried annually and restocked as resources are expended.

Further company owned and maintained equipment is stored in listed trailers at local area storage facilities for immediate response until additional resources arrive. These resources are maintained and restocked by the respective area supervisors as needed.

Temporary storage is available via company owned and operated storage tanks throughout the pipeline system. Recovered product can often be off loaded at pump stations with tankage and then re-injected into the pipeline.

Enbridge has working agreements with Garner Environmental Services Inc. and Bay West to supplement resources in the event of a worst case discharge scenario. Both of these entities are United States Coast Guard (USCG) classified Oil Spill Response Organizations (OSRO). A copy of the OSRO's equipment inventories are kept on file at each region office.

Numerous other HAZWOPER trained contractors may be utilized for emergency response and their contact information and resources can be found listed by response zone in the Enbridge Emergency Response Directory. Enbridge does not retain equipment inventory lists for all non USCG classified contractors.



COMPANY/COOPERATIVE EQUIPMENT LISTS

Company-

Emergency Response (ER) Trailer Lists and Locations

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BAY CITY PLM EMERGENCY RESPONSE EQUIPMENT

MISCELLANEOUS

QTY	DESCRIPTION
1	6000 Watt Light Plant on Wheels
2	18' Lund Boats with 50/hp Motors
4	2" Trash Pumps
2	3" Trash Pumps
15	20' 2" Tank Truck Hose
15	20' 3" Tank Truck Hose
10	Bundles Absorbent Pads (100/Bundle)
1	185 cfm Wheeled Air Compressor
1	Polaris 6 x 6 ATV
1	4810 ASV Rubber Tracked Machine
1	420 Cat Rubber Tired Backhoe
1	TD550 John Deere Dozer

LEAK TRAILER

4	30# Fire Extinguishers
4	Safety Belts and Tag Lines
1	Fire Blanket
2	Windssocks
10	Neoprene Hip Boots and Gloves (Pairs)
5	NGL Protective Equipment (Face Shields, Mitts, Protective Sleeves and Aprons)
10	Sets Fire Retardant Clothing
10	Sets Fire Retardant Rain Gear
2	Scott Air Paks (2.2 cu. ft. Units)
1	First-Aid Kit
1	Stretcher
2	Wool Blankets
1	3" Air Operated Diaphragm Pump
1	2" Trash Pump
45-50'	Rigid Suction/Discharge Hose
5	Bales Sorbent Pads
4	Road Barricades w/Flashers
4	Danger Signs to Warn Public
10	High Visibility Vests
1	Roll Caution Tape to Barricade Leak Area and Trenches
1	Portable Generator
1	Air Horn
4	Shovels
1	Sledge Hammer
1	Axe
12	Steel Fence Posts
1	Plastic Fencing (Roll)



BAY CITY PLM - LEAK TRAILER cont.

QTY	DESCRIPTION
1	12 Volt Spotlight
6	Rolls Mylar Scare Tape
12	Scare Balloons or Equivalent
1	Grounding Rod

BOOM TRAILER

5	Bundles Absorbent Pads
200'	Absorbent Boom
4	Fabricated Disc Anchors
4	15lb Danforth Anchors
4	15' Lengths of 1/2" Anchor Chain
500'	Floating Oil Boom w/Quick Latch Couplings
2	Boom Tow Bridles
5	Anchor Marker Buoys w/Boom Connection
2	3" Kamlock-Male (Female Thread)
2	3" Kamlock Female (Female Thread)
2	3"x 2" Kamlock Adapters
2	2" Kamlock Male (Female Thread)
2	2" Kamlock Female (Female thread)
1	3" Air Operated Diaphragm Pump w/3" Kamlocks
60'	Rigid Suction/Discharge Hose
30'	3" Floating Discharge Hose
5	Hose Floats
1	Skim Pak Weir Skimmer w/Discharge Hose, Wand Extension, and Debris Screen
1	Manta-Ray Floating Suction Head
1	1800 Gal. Porta-Tank and Liner
10	Steel Toe Chest Waders (Pairs)
10	Neoprene Rubber Gloves (Pairs)
10	USCG Approved Life Vests
6	Safety Belt and Tag Lines
1	Rope Reel or Various Lengths of Rope w/Quick Connect Fittings
4	Shovels
1	Sledge hammer
1	Bolt cutter
1	Axe
12	Steel Fence Posts
1	Drive in Fence Post Anchor
5	Screw in Fence Post Anchors
1	Megaphone
1	12 Volt Hand-Held Spotlight
1	Amber 12 Volt Strobe Light
2	Rolls Plastic Fencing
1	Assorted Lumber of 2' x 4" & 2" x 6" (Lot)



COMMAND POST TRAILER

QTY	DESCRIPTION
	Book 1 (O&MP Procedures-General Reference)
	Book 2 (O&MP Procedures-Safety)
	Book 3 (O&MP Procedures-Pipeline Facilities)
	Book 7 Emergency Response
	Emergency Response Directory
	Environmental Sensitivity Maps
	Radio Directory
1	Grease Board w/Markers and Eraser
5	Sets Fire Retardant Clothing
5	Sets Fire Retardant Rain Gear
5	Hard Hats for Visitors
1	First-Aid Kit
1	Strobe Light
1	Pedestal Sign (<i>Visitors to Stop at Command Post</i>)
1	12 Volt Spotlight
3	Flashlights
1	Roll Tape to Restrict Site Access
1	Portable Generator

FORT ATKINSON PLM INVENTORY

RESPONSE BOATS/ MOTORS/ TRAILERS

LEAK TRAILER

1	1986 14' Alumacraft John Boat
	Model 1457 (Serial # ABCD19L3L586)
	Reg # WS 3662 (WI) Expires 03-31-2009
1	1986 Johnson 9.9 Motor (Serial # R 08218672) Two-Stroke
1	1992 Pace American Trailer
	Model 820TA3 (20') Unit # 431 GVW 10,000 Actual Wt.
	(Serial # 40LAB2028NPO16323)
	License # BR 2284 (WI) Expires 12-31-07 Smith # AC 7599
	Safety Inspection 08-06 Due 08-07 Tire Size ST225/75R15
2	Boat Oars

BOOM TRAILER

1	1990 Mac Lander Trailer
	Model 20' Unit #299 GVW 11,440 Actual Wt.
	(Serial # 1M9PV2020L1217041)
	License # DR 1028 (WI) Expires 12-31-07 Smith # AC 7552
	Safety Inspection 08-06 Due 08-07 Tire Size 9.50 - 16.5 LT

COMMAND POST

1	1990 TSI Trailer
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FORT ATKINSON PLM - COMMAND POST BOAT cont.

QTY	DESCRIPTION
	Model 8x28 (28') Unit # 268 GVW 4,500 Actual Wt.
	(Serial # 906123)
	License # AR 1983 (WI) Expires 12-31-07 Smith # AC 4310
	Safety Inspection 08-06 Due 08-07 Tire Size F 78x15

MISCELLANEOUS

35	Bags Sorbent Pads 100/Bag (3,500 Pads)
11	Bags Sorbent Boom 8" x 10' - 4/Roll - 4/Bag (440' Total)
2	3" Trash Pumps
5	2" Trash Pumps
2	2" Electric Pumps
1	2" Hydraulic Pump
1	3" Hydraulic Pump
1	2" Air Pump
2	3" Air Pumps
1	Kerosene Heater
1	Z-3500 Warn Winch

LEAK TRAILER

1	4 ft. Elastec Drum Skimmer
1	8 ft. Elastec Drum Skimmer
1	Elastec Skimmer Power Unit
1	50' section of orange mini boom
1	Stretcher
1	Roll of Plastic
3	12 ft. Pike Poles
164'	Orange Plastic Fence
1	30# Fire Gun
3	Traffic Safety Cones (Orange)
2	Joints 3" Clear Plastic Hose
1	Kerosene Heater
5	Bags Sorbent Pads 100/Bag (500 Total)
2	Bags Sorbent Boom 6" x 10' - 40 ft. Each- 4/ Bag (80 ft.Total)
1	Windsock
4	Erickson Safety Lights
	Assorted 2" & 3" Kamlock Fittings
1	Incident Command Chart
1	Prowler Owl
1	Roll <i>BURIED PIPELINE</i> Tape
1	Roll <i>DANGER</i> Tape
1	Roll <i>FITTING ON LINE</i> Tape
2	Rolls Flagging Ribbon (Yellow)
50	Marking Flags



FORT ATKINSON PLM - LEAK TRAILER cont.

QTY	DESCRIPTION
4	Do Not Enter Signs
4	Pair Rubber Arm Sleeve's
3	Face Shields
5	Rubber Aprons
15	Safety Vests (Orange)
5	Mylar Scare Tape (Rolls)
18	Scare Balloons
12	Rain Jackets (Various Sizes)
12	Rain Pants (Various Sizes)
2	Sledge Hammers
1	Axe
4	Hard Hat Face Shield Adaptors
4	Miller Safety Belts
4	Miller Safety Lines
20	Pair Rubber Gloves
1	Stihl Leaf Blower
2	6 Volt Batteries
3	Fire Blankets
1	Fence Post Driver
10	Life Jackets(Various Sizes)
1	Throwable Boat Cushion
13	Nomex Coveralls (Various Sizes)
8	Amber Barricade Warning Lights
4	Barricades
2	Flash Lights
1	Portable Spot Light
1	Mora Hand Ice Auger
1	Eskimo Gas Powered Ice Auger
2	Joints 1 3/4" Flexible Discharge Hose
1	Bundle Rags
2	044's Stihl Chain Saws
3	1 Gal. Bottles of Bar Oil
1	Cooler
10	Pair Waders (Various Sizes)
8	Pair Steel-Toed Winter Pak Boots
12	Carsonite Posts
200'	Rope
1	First-Aid Kit
4	Shovels
1	Honda Generator (Model EM3500S)
1	Tow Bridal

BOOM TRAILER

1280'	Floating Boom w/Quick Latch Couplings (Various Lengths)
4	Bags Sorbent Boom 6" x 10' - 40' Each 4/Bag



FORT ATKINSON PLM - BOOM TRAILER cont.

QTY	DESCRIPTION
2	Bundles of Orange Mini Boom 50' Each
4	Sorbent Pads 100/Bag
2	Joints 2" Clear Hose
1	Joints 3" Clear Hose
5	Traffic Safety Cones
5	Marker Buoys w/Chains and Clips
	Assorted Lumber
1	3" Roper Diaphragm Pump Air Operated
1	Manta Ray Skimmer
1	Waders (Pair)
300'	Nylon Rope
50'	Extra Boom Chain
1	3" Wand Skimmer - Skim Pak Weir Skimmer
1	Debris Screen
1	Fence Post Driver
4	3" hose floats
	Assorted 2" & 3" Kamlock Fittings
5	Life Jackets
16	Pair Pik-of-Life Ice Picks
1	Bull Horn
2	Rescue Disks w/100' of Rope Attached
1	Air Horn Signal Device
4	Nylon Gloves (Winter) (Pairs)
5	Rubber Gloves (Pairs)
1	Safety Harness
4	Safety Vests (Orange)
4	Amber Barricade Flashers
1	Amber Emergency Flashing Light - Magnetic
1	12 Volt Hand-Held Spot Light
2	Flashlights
1	Roll <i>DANGER</i> Tape (Red)
1	Roll <i>BURIED PIPELINE</i> Tape
1	Roll <i>FITTING ON LINE</i> Tape
8	Steel Fence Posts
1	Windsock
1	Sledge Hammer
1	Axe
4	Shovels
1	Roll Plastic Fence
1	6 Gal. Gas Tank (Empty)
1	30# Fire Gun
3	Anchors and Chains
3	Spiral Anchors
1	Bolt Cutter
1	Stretcher



FORT ATKINSON PLM - BOOM TRAILER cont.

QTY	DESCRIPTION
1	1800 Gal. Porta-Tank and Liner
1	First-Aid Kit

COMMAND POST

2	12 Volt Battery Chargers
3	Folding Chairs
1	Weather Haven Endurance Tent
4	Toilet Paper (Rolls)
1	Paper Towel (Rolls)
1	First-Aid Kit
4	Sets of Rain Gear Various Sizes
1	Pair Rain Pants
1	Plastic Battery Holder
1	Bag Rags
1	Bag Sorbent Pads - 100
	Miscellaneous Office Supplies
2	Signs " All Persons Must Report To Command Post When Leaving"
2	Enbridge Incident Command Charts
1	Enbridge Site Safety Plot Plan (Roll Up)
1	Extension Cord
1	Orange Safety Vest
1	Extension Cord (end to be hard wired)
1	Flash Light and Charger
4	Nomex Coveralls Various Sizes (Blue)
7	Nomex Coveralls Various Sizes (Red-Visitor)
2	Winter Jackets Nomex
5	Winter Blankets
1	Chalkboard Style Site Safety Plot Plan
1	Roll CAUTION DO NOT ENTER Tape
1	Amber Strobe Light
2	Amber Barricade Lights

DUNDEE PLM INVENTORY

BOOM TRAILER

300'	Slick Bar Boom w/Quick Latch Couplings
5	Bags Sorbent Boom 6" x 10' - 40' Each 4/Bag
3	Bags Sorbent Boom 4" x 10' - 40' Each 4/Bag
2	Bags Sorbent Pads 100 Each - 200 Pads
3	Chicken Wire Fence 150'/Rolls - 450'
1	Warning Fence 100' Roll (Orange)
10	Steel Fence Posts
2	Spade Shovels
2	Rolls Plastic Sheet 25' Rolls - 50 ft.



DUNDEE PLM - BOOM TRAILER cont.

QTY	DESCRIPTION
1	Sledge hammer
1	Poly rope 100' (Roll)
1	CAUTION Tape (Roll)
1	Box Rubber Gloves
1	Bailing Wire (Roll)
2	Safety Vests (Orange)
1	Claw Hammer
1	Box Nails
1	Hacksaw
1	Pliers
1	1992 Pace American Trailer
	Model 20' Unit # 432 GVW 10,000 Actual Wt.
	(Serial # 40LAB2027NP016247)
	License # BR 2285 (WI) Expires 12-31-07 Smith #
	Safety Inspection 08-06 Due 08-07 Tire Size ST 225/75R15

MARSHALL PLM INVENTORY

MISCELLANEOUS

7	2" Water Pumps
3	3" Water Pumps

BOOM TRAILER

5	Bundles Sorbent Pads
200'	Sorbent Boom
4	Fabricated Disk Anchors
4	15# Danforth Anchors
4	15' Lengths 1/2" Anchor Chain
500'	Floating Boom w/ Quick Latch Connectors
2	Boom Tow Bridles
5	Anchor Marker Buoys w/ Boom Connection
	Assorted 2" and 3" Kamlock fittings
1	3" Air Operated Diaphragm Pump
60'	Rigid Suction / Disc. Hose
30'	3" Floating Disc. Hose
5	Hose Floats
1	Skim-Pac Weir w/Disc. Hose, Wand and Debris Screen
1	Manta-Ray Floating Suction Head
1	1800 Gal. Porta-Tank
10	Steel-Toe Chest Waders (Pairs)
10	Neoprene Rubber Gloves (Pairs)
10	USCG Approved Life Vests
6	Safety Belt and Tag Lines
1	Reel Rope Polytron and Disconnect Fittings



MARSHALL PLM - BOOM TRAILER cont.

QTY	DESCRIPTION
4	Shovels
1	Sledge Hammer
1	Bolt Cutter
1	Axe
12	Steel Fence Posts
1	Drive-in Fence Post Anchors
5	Screw-in Fence Posts Anchors
1	Megaphone
1	12 Volt Hand-Held Spotlight
5	Rolls Plastic Fence
12	2 x 4 x 12 Lumber
12	2 x 6 x 12 Lumber

LEAK TRAILER

5	30# Fire Extinguishers
4	Safety Belts and Taglines
1	Fire Blanket
2	Windsocks
10	Neoprene Hip Boots (Pairs)
10	Neoprene Gloves (Pairs)
10	Fire Retardant Clothing (Sets)
10	Fire Retardant Rain Gear (Sets)
2	SCBA Scott Air Packs
1	First-Aid Kit
1	Stretcher
2	Wool Blankets
5	Face-Shields
5	Insulated Mitts
5	Protective Sleeves
5	Aprons
2	NGL Flare Launchers and Cartridges
1	3" Air Operated Diaphragm Pump
1	2" Trash Pumps
50'	Rigid Suction / Disc. Hose
5	Sorbent Pads (Bundles)
4	Road Barricades w/ Amber Flashers
4	Danger Signs
10	Reflective Vests
1	Roll Caution Tape
1	Portable Generator
6	Shovels
1	Sledge Hammer
2	Axe
12	Steel Fence Posts



MARSHALL PLM - LEAK TRAILER cont.

QTY	DESCRIPTION
1	Plastic Fence (Roll)
1	Hand Held Spotlight 12v
6	250' Rolls Mylar Bird Scare Tape
12	Animal / Bird Scare Balloons
1	Ground Rod

VESPER PLM INVENTORY

BOATS/ TRAILERS

1	Boat 18' (Lund with 50hp Mercury and Trailer)
1	Boat 22' (Jet with 2 Motors and Trailer)

MISCELLANEOUS

1	Winter Weather Shelter (8' X 12')
2	Chainsaw (Stihl 044 with 32" Bar)
1	Diaphragm Pump 3"
1	Diaphragm Pump 2"
1	Hydraulic Pump 2" with Power Unit
1	Backpack Air Blower
1	Ice Auger (8" with Gas Motor)
1	Venturi Air Mover
2	Generator (5000watt)
2	Torpedo Heaters
3	Trash Pump 2"
1	Trash Pump 3"
100'	River Boom
1	Air Mover
1	Rescue Basket

BOOM TRAILER

300'	River Boom
268'	Mini Boom
240'	8" Sorbent Boom (10' Sections)
160'	5" Sorbent Boom (10' Sections)
12	Bag of Sorbent Pads (17" X 19" 100 Pads/Bag)
1	Environmental Sample Kit
2	Explosion Proof Drop Lights
1	3" Skimmer with Air Hose and Motor
1	Portable Tank and Accessories 1500 Gal.
2	15' Pike Poles
1	Electric Winch 3500#
6	Tow Bridles for Mini Boom
7	Buoys 12"
8	River Anchors with Rope



VESPER PLM - BOOM TRAILER cont.

QTY	DESCRIPTION
1	Chicken Wire 100' Roll
1	Nylon Rope with Clevis 100'
1	Nylon Rope with Clevis 75'
1	Nylon Rope with Clevis 50'
5	5 Point Body Harness
3	Caution Tape (Rolls)
2	Rescue Discs
2	Flashlights
8	Incident Command System Reflective Vests
1	Bag of Rubber Gloves
1	Hacksaw
1	Tin Snip
1	Pliers
3	# of 3.5" 16 Penny Nails
10	Boom Connector
1	Prowler Owl
3	Mylar Tape (Rolls)
1	Box of Garbage Bags
6	Pick-O-Life
1	First-Aid Kit
1	Rope 200' Roll
1	Windsock and Pole
2	Kamlock Male 3"
2	Kamlock Female 3"
1	Kamlock Male 2"
1	Kamlock Female 2"
1	Spare Tire
1	Sledge Hammer
4	Screw Anchors
2	Shovels
2	Pitch Forks
13	Fence Posts
2	Hoses 2" 25'
1	Large Boom Anchor
1	Fire Blanket



GRIFFITH TERMINAL EMERGENCY RESPONSE EQUIPMENT

QTY	DESCRIPTION
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GRIFFITH FIRE PROTECTION BUILDING

2	1 3/4" x 50' Fire Hose (on Foam Trailer)
2	2 1/2" x 25' Fire Hose (on Foam Trailer)
1	500 Gal. Foam Trailer
6	55 Gal. Barrels AFFF Foam
10	50# Pails of Dry Chemical Fire Extinguisher (Purple K)
1	200' Mobile Hose Reel
4	2 1/2" x 50' Fire Hose (on Foam Trailer)
2	Tank Rescue Basket
2	Road Guard Reflective Vests
1	Windsock
1	3 ft. Handle Axe
2	10# Sledge Hammers
	Various Rain and Flood Gear
	3 Steel, 2 Aluminum, 1 Plastic Flat Shovels

GRIFFITH COLD STORAGE

20	Bales of 3' x 3' Absorbent Pads (100 per Bale)
4	8" x 10' Bales of Boom (4 per Bale)
2	30" x 150' Rolls of Oil Absorbent Pad
2	Portable Hydraulic Units
2	Squeegees
2	Steel Rakes
2	Chicken Fencing (Rolls)
1	Wheel Barrow

HARTSDALE NORTH GARAGE

9	Bags of 8" Boom (Total of 280')
20	Bags of 5" Boom (Total of 840')
6	Bales of 3' x 3' Absorbent Pads (100 per Bale)
1	Spade Shovel



STATION RESPONSE EQUIPMENT GUIDELINES

Enbridge retains the suggested minimum response materials at each pump station along our pipeline system. This equipment is intended for minor spills or short term containment until additional resources arrive.

(These quantities are suggested minimums – each location is encouraged to add or modify this list based on needs specific to that location).

200 feet – 5” Sorbent Boom

200 feet – 8” Sorbent Boom

2 – Bales Sorbent Pads (17’ x19” x 3/16”) minimum 100 pads per bale

2 – Bales Sorbent Pads (17’ x19” x 3/8”) minimum 100 pads per bale

5 – Bales Sorbent Roll (38” x 144’ x 3/8”)



LEWISTON STATION INVENTORY

BOOM TRAILER

QTY	DESCRIPTION
20	Bales of Straw
200'	6"Containment Boom
200'	5" Sorbent Boom (5 Bales-40' each)
200'	8" Sorbent Boom (5 Bales-40' each)
1	Bale Sorbent Pads (100 Grade)
1	Bale Sorbent Pads (200 Grade)
2	Waders (Pairs)
1	Windsock
200'	Rope- 3/8" (4)-50' Ropes
12	Fence Posts
100'	Baling Wire
2	Life Jackets
2	Flashlights w/Batteries
1	Electrician Pliers
10	Garbage Bags
1000'	Barricade Tape
450'	Chicken Wire Fencing (3 Rolls)
12	Lumber (2" x 4" x 12')
12	Lumber (2" x 6" x 12')
4	Shovels
1	Joint Culvert (12" x 10')
5	# 16 Penny Nails
1	Tin Snips
1	Claw Hammer
1	Rake
1	Hacksaw
2	Reflective Vests
1	Permalon Plastic (40' x 100') x 210 Ply
2	Rubber Gloves (Pairs)
10	Wood Lathe
1	Sledge Hammer

NORTH BRANCH STATION INVENTORY

BOOM TRAILER

20	Bales of Straw
200'	6"Containment Boom
200'	5" Sorbent Boom (5 Bales-40' Each)
200'	8" Sorbent Boom (5 Bales-40' Each)
1	Bale Sorbent Pads (100 Grade)
1	Bale Sorbent Pads (200 Grade)
2	Waders (Pairs)
1	Windsock
200'	Rope- 3/8" (4)-50' Ropes



NORTH BRANCH - BOOM TRAILER cont.

QTY	DESCRIPTION
12	Fence Posts
100'	Baling Wire
2	Life Jackets
2	Flashlights w/Batteries
1	Electrician Pliers
10	Garbage Bags
1000'	Barricade Tape
450'	Chicken Wire Fencing (3 Rolls)
12	Lumber (2" x 4" x 12')
12	Lumber (2" x 6" x 12')
4	Shovels
1	Joint Culvert (12"x 10')
5	# 16 Penny Nails
1	Tin Snips
1	Claw Hammer
1	Rake
1	Hacksaw
2	Reflective Vests
1	Roll Permalon Plastic (40' x 100') x 210 ply
2	Rubber Gloves (Pairs)
10	Wood Lathe
1	Sledge Hammer

MARYSVILLE STATION INVENTORY

BOOM TRAILER

20	Bales Straw
200'	6"Containment Boom
200'	5" Sorbent Boom (5 Bales-40' Each)
200'	8" Sorbent Boom (5 Bales-40' Each)
1	Bale Sorbent Pads (100 Grade)
1	Bale Sorbent Pads (200 Grade)
2	Waders (Pairs)
1	Windsock
200'	Rope- ³ / ₈ " (4)-50' Ropes
12	Fence Posts
100'	Baling Wire
2	Life Jackets
2	Flashlights w/Batteries
1	Electrician Pliers
10	Garbage Bags
1000'	Barricade Tape
450'	Chicken Wire Fencing (3 Rolls)
12	Lumber (2" x 4" x 12')
12	Lumber (2" x 6" x 12')
4	Shovels



MARYSVILLE - BOOM TRAILER cont.

QTY	DESCRIPTION
1	Joint Culvert (12" x 10')
5	# 16 Penny Nails
1	Tin Snips
1	Claw Hammer
1	Rake
1	Hacksaw
2	Reflective Vests
1	Permalon Plastic (40' x 100') x 210 Ply
2	Rubber Gloves (Pairs)
10	Wood Lathe
1	Sledge Hammer

BUFFALO STATION INVENTORY

BOOM TRAILER

6	Bundles Sorbent Pads (100 Each)
12	Sections 5" x 10' Sorbent Boom - 120 ft
12	Sections 8" x 10' Sorbent Boom - 120 ft.
2	½" Anchor Chain- 20' length
1	IC Organizational Chart
2	½ Lengths Anchor Chain - 20 ft.
2	Boom Tow Bridle
2	Boom Tow Paravane
2	Boom Tow Sling - 3/8 Cable/Hooks - 25 ft.
12	Hand Line Tow Bridle
6	Drive-In Pins/ Wings/ Driver
4	Screw Anchor
3	Marker Buoy
2	Buoy Anchors
1	½" Rope & Reel - 50 ft. (yellow)
1	½" Rope & Reel - 100 ft. (green)
6	½" Rope/Snap Hooks on Both Ends - 25 ft. (blue)
1	Honda ES6500 Generator
1	Honda 2"XP Trash Pump
2	3" Floating Suction Hose - 15 ft.
2	Rigid 2" Discharge Hose - 20 ft.
2	2" Flexible Discharge Hose - 50 ft.
1	3" Pedco Skimmer
2	1,500 Gal. Porta-Tank Liner
1	1,500 Gal. Porta-Tank Frame
1	Porta-Tank Hose Saddle
1	2" Wash Down Nozzle
5	3" x 2" Kamlock Fittings
10	Orange Traffic Cones
2	Sledge Hammer
24	30 mil. Nitrile Gloves



BUFFALO - BOOM TRAILER cont.

QTY	DESCRIPTION
2	Full Body Harness
4	Type 1 Life Vests (2 Large, 2 Xlarge)
5	Steel Toe Thigh High Boots
7	Steel Toe Chest Waders
1	First-Aid Kit
1	30# Fire Extinguisher
2	Windsock
1	Sorbent Roll
1	Fire Blanket
4	Barrier Fence with Stakes- 100' lengths
2	Rolls Hot Zone Tape
2	Rolls Warm Zone Tape
HOWELL STATION PLM INVENTORY	

BOOM TRAILER

4	Bundles of Sorbent Pads
5	Bags of 5" Sorbent Boom
5	Bags of 8" Sorbent Boom
20	Bales of Straw
200'	Containment Boom
12	2 x 4 x 12 Lumber
12	2 x 6 x 12 Lumber
2	Pair Waders
1	Windsock
3	Rope 50' Sections
1	Roll Bailing Wire
2	Flashlight w/Batteries
1	Electricians Pliers
10	Garbage Bags
2	Life Jackets
4	Shovels
5	# 16 Penny Nails
1	Tin Snips
1	Claw Hammer
1	Hacksaw
1	Reflective Vest
1	Roll Plastic
2	Pair Rubber Gloves
1	Sledge Hammer
10	Wood Laths
12	Fence Posts
1	Roll Barricade Tape
3	Rolls Chicken Wire
1	Culvert 12" x 10'
1	Rake



NILES STATION INVENTORY

BOOM TRAILER

QTY	DESCRIPTION
2	Bundles of Sorbent Pads
5	5" Sorbent Boom (Bags)
5	8" Sorbent Boom (Bags)
20	Straw (Bales)
200'	Containment Boom
12	2 x 4 x 12 Lumber
12	2 x 6 x 12 Lumber
2	Pair Waders
1	Windsock
2	Rope 50' Sections
1	Roll Bailing Wire
2	Flashlight w/batteries
1	Electricians Pliers
10	Garbage Bags
2	Life Jackets
3	Shovels
5	# 16 Penny Nails
1	Tin Snips
1	Claw Hammer
1	Hacksaw
1	Reflective Vest
1	Roll Plastic
2	Pair Rubber Gloves
1	Sledge Hammer
10	Wood Laths
12	Fence Posts
1	Roll Barricade Tape
3	Rolls Chicken Wire
1	Culvert 12" x 10'
1	Rake

SHELDON STATION INVENTORY

BOOM TRAILER

500'	River Boom
3	Chicken Wire (Roll)
1	Barricade
160'	Sorbent Boom 5" (10' Sections)
3	Snow Fence (Rolls) (50' Each)
2	Shovels
1	Pitch Fork
1	Sledge Hammer
6	Bag of Sorbent Pads (17"X19" 100 Pads/Bag)
2	Wood Board 2" X 6" X10'



SHELDON BOOM TRAILER cont.

QTY	DESCRIPTION
2	Wood Board 2" X 10" X 10'
1	Spare Tire
2	Flashlight
100'	Rope (Roll)
2	Caution Tape
1	Garbage Bags (Box)
12	Rubber Gloves

STANLEY RESPONSE BOAT EQUIPMENT INVENTORY

6	USGS Approved Life Vests
1	½" Rope- 50' length (yellow)
1	½" Rope- 100' length (green)
1	½" Rope- 25' length (blue)
3	Marker Buoys
2	30# Fire Extinguishers
2	Danforth Anchors
3	Buoy Anchors

WAREHOUSE STORAGE EQUIPMENT INVENTORY

2	3" Floating Suction Hose
1	1,500 Gal. Porta-Tank Frame
3	Fabricated Disc Anchors
1	Sorbent Roll
10	Drive Pins/ Wings
4	Screw Anchors
1	3" Diverter Manifold
12	½" Anchor Chain 20' Length



ENBRIDGE ENERGY WINTER SPILL EMERGENCY RESPONSE EQUIPMENT

Winter Equipment: The company maintains the following equipment for winter/cold weather spill response staged at each Pipeline Maintenance Facility.

WINTER EQUIPMENT	BAY CITY	MARSHALL	GRIFFITH	FT. ATKINSON	VESPER	TOTAL
Backpack Leaf Blowers	1	1	1	1	1	5
Portable Heaters - All	2	1	2	2	2	9
Power Ice Augers	2	1	1	1	1	6
Chainsaws	2	2	2	2	2	10
Winches	1	1	1	1	1	5
50' Lengths Mini Boom	8	4	2	3	3	20
Tow Bridles	6	6	2	3	6	23
Pike Poles	3	1	3	3	3	13
Pick-of-Life	8	17	19	16	6	66
3500w - 10000w Generator	1	1	1	1	2	6
Hydraulic Submersible Pumps	1	1	1	2	1	6
1 lot Aluminum Camlock Fittings	1	1	1	1	1	5
25' Length 2" Low Temp Hose	2	0	0	0	2	4
LWT Hose Floats for 3" Hose	0	0	0	4	0	4
Hand Ice Augers w/Extention	1	1	0	1 (no ext.)	1	3
Hazardous Location Trouble Light	2	2	6	4	2	16
Ice cleats	0	0	1	0	0	1
Shelter	0	0	0	1	1	2

Due to the seasonal nature of this equipment, it may not be stored in existing response trailers. The Pipeline Supervisor responsible for the facility will ensure that the equipment is maintained, inventoried and accessible in the event of a winter spill incident.

Revised April 2007



ENBRIDGE PIPELINES (CHICAGO) EMERGENCY RESPONSE EQUIPMENT

APRIL 25, 2007 PRIMARY WATER RECOVERY EQUIPMENT	LEWISTON	BAY CITY PLM	NORTH BRANCH	MARYSVILLE	BUFFALO	HOWELL	TOTAL
Boom & Absorbents							
Containment Boom - River (Feet)	200'	500'	200'	200'	300'	200'	1600'
Containment Boom - Small (Feet)							
Sorbent Boom (Feet)	400'	200'	400'	400'	240'	100'	1740'
Sorbent Pads (Bundles of 100)	200'	2000'	200'	200'	600'	400'	3600'
Sorbent Sweep/Rolls (Bales)					2		2
Skimmers							
3' Drum Skimmer							
4' Drum Skimmer		1					1
8' Drum Skimmer							
Skimmer Power Pak							
Manta Ray		1					1
Skim Pak Weir Skimmer							
Pedco Weir Skimmer					1		1
Pumps							
2" Air Operated + Hoses							
3" Air Operated + Hoses		2					2
2" Trash Pump + Hoses		5			1		7
3" Trash Pump + Hoses		2					2
2" Hydraulic Pump + Hoses							
3" Hydraulic Pump + Hoses							
4" Hydraulic Pump + Hoses							
2" Electric Pump + Hoses							
Storage							
Vacuum Truck - 1500 - 1800 Gal		1					1
Portable Storage Tanks (1800 Gal)		1			2(1500 Gal)		3
Tankage Storage		5000 bbls at Bay City					



ENBRIDGE PIPELINES (CHICAGO) EMERGENCY RESPONSE EQUIPMENT (cont.)

APRIL 25, 2007 PRIMARY WATER RECOVERY EQUIPMENT	LEWISTON	BAY CITY PLM	NORTH BRANCH	MARYSVILLE	BUFFALO	HOWELL	TOTAL	
Boats & Motors								
18' Lund w/Motor & Equipment		2					2	
20' Lund Alaskan w/Motor & Equipment								
14' John Boat								
22' Jet Boat w/Twin Inboard								
17' Lifetimer w/Motor & Equipment					2		2	
16' Alumacraft Flat Bottom Boat								
Response Trailers								
Leak Trailers (Van)		1					1	
Boom Trailer	1	1	1	1	1	1	6	
Command Post Trailer		1					1	
	MARSHALL PLM	NILES	GRIFFITH PLM	DUNDEE	FT. ATKINSON PLM	VESPER	SHELDON	TOTAL
Boats & Motors								
Containment Boom - River (Feet)	1100	200	500	300	1280	400		3780'
Containment Boom - Small (Feet)	200				150	268	500	1118'
Sorbent Boom (Feet)	200	100	200	320	680	400	160	2060'
Sorbent Pads (Bundles of 100)	1000	200	1100	200	4500	1200	600	8800'
Sorbent Sweep/Rolls (Bales)	2							2
Skimmers								
3' Drum Skimmer	1					1		2
4' Drum Skimmer			1		1			2
8' Drum Skimmer					1			1
Skimmer Power Pak					1			1
Manta Ray	1		1		1			3
Skim Pak Weir Skimmer	1				1			2
Pedco Weir Skimmer								



ENBRIDGE PIPELINES (CHICAGO) EMERGENCY RESPONSE EQUIPMENT (cont.)

	MARSHALL PLM	NILES	GRIFFITH PLM	DUNDEE	FT. ATKINSON PLM	VESPER	SHELDON	TOTAL
Pumps								
2" Air Operated + Hoses	2		2		1	1		6
3" Air Operated + Hoses	1		3		3	1		8
2" Trash Pump + Hoses	9		3		5	2		19
3" Trash Pump + Hoses	5		1		2	1		9
2" Hydraulic Pump + Hoses	1				1	1		3
3" Hydraulic Pump + Hoses					1			1
4" Hydraulic Pump + Hoses			1					1
2" Electric Pump + Hoses					1			1
Storage								
Vacuum Truck - 1500 - 1800 Gal			1			1		2
Portable Storage Tanks (1800 Gal)	1		1		1	1		4
Tankage Storage	2000 bbls at Marshall			3.1 million bbls at Griffith		5000 bbls at Adams		
Boats & Motors								
18' Lund w/motor & equipment	1				2	1		4
20' Lund Alaskan w/motor & equipment			1					1
14' John Boat			1		1			2
22' Jet Boat w/twin inboard	1					1		2
17' Lifetimerw/motor & equipment								
16' Alumacraft flat bottom boat	1							1
Response Trailers								
Leak Trailers (van)	1		1		1			3
Boom Trailer	1	1	1	1	1	1	1	7
Command Post Trailer					1			1



SPECIALTY CONTRACTOR CONTACTS

BAY WEST

Bay West is an established Coast Guard classified **OSRO** (Oil Spill Response Organization) responding out of Minneapolis, Minnesota, that provides 24-hour emergency spill response. Their services include cleanup, removal and the remediation of oil spill sites as well as environmental investigations and assessments.

Bay West has an extensive inventory of emergency response equipment, HAZMAT and HAZWOPER trained personnel, and an experienced support staff to respond to various types of spill scenarios.

Enbridge has retained Bay West by means of an Emergency Response retainer to supplement internal resources in the event of a pipeline incident. Copies of their inventory and equipment lists can be obtained through Enbridge Energy's Superior Regional Office.

A list of Bay West's emergency response equipment can be found at:
<http://www.baywest.com/emergency.htm>

Bay West
5 Empire Drive
St. Paul, MN 55103
(651) 291-0456
1-800-279-0456 (24 hrs.)
www.baywest.com

GARNER ENVIRONMENTAL SERVICES INC.

Garner Environmental Services is a full service environmental and emergency response company based near Houston, TX. Numerous locations and away teams, allows response in a timely manner to any situation upon notification.

Enbridge has contracted with Garner to provide personnel, equipment, and expertise in the event of a **WORST CASE DISCHARGE** situation where timeliness is critical and additional resources are needed. The Master Service agreement is located in the Superior Regional Office. Copies of inventory and equipment lists can be obtained through the Region Offices.

A list of Garner Environmental Services' emergency response equipment can be found at:
<http://www.garner-es.com/documentsdown.html>

Garner should only be contacted from the Qualified Individual (QI) level or higher. The QI may wish to confer with senior management or the crisis management team prior to enlisting Garner's services.

Garner Environmental Services Inc.
1717 W 13th St.
Deer Park, TX 77536
(281) 930-1200
1-800-424-1716 (24 hrs)
www.garner-es.com



CANADIAN CROSS BORDER EMERGENCY RESPONSE EQUIPMENT

Enbridge recognizes that there may be circumstances where additional resources are required for emergency response in our operating areas along the U.S / Canadian border. In these situations, agreements have been reached to allow equipment and manpower to cross the border to respond. These agreements have been discussed and cleared with both the U.S. and Canadian Customs offices. Equipment and manpower lists have been provided to these entities as a reference in the event a cross border crossing becomes necessary.

These Canadian areas are included in this cross border agreement:

- Westover Ontario
Inventory lists attached
- Sarnia Ontario
Inventory lists attached



WESTOVER EMERGENCY RESPONSE TRAILERS

UNIT 70203

QTY	DESCRIPTION
1	Booster Cable
1	30# Fire Extinguisher- Dry Chemical Extinguisher
1	First-Aid Kit
1	Flags (Red Cloth)
2	Flashing Amber Light
1	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
3	Vehicle Recovery Strap
1	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Control Point Map Book
0	Initial Response Guide Book
Valid	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for Timely Return to Work
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Multi-Screwdriver
1	Adj. Wrench
1	Wire Stripper
1	Needle Nose Pliers
1	Small Sledge Hammer

WESTOVER - UNIT 776

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket in Suitable Case
2	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)



WESTOVER - UNIT 776 cont.

QTY	DESCRIPTION
1	Flashing Amber Light
1	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for <i>Timely Return to Work</i>
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Lincoln 350-Classic IIID Diesel-Welding Machine
	Cutting Torches
	Oxygen Gauges + Hose - 50 ft.
	Acetyln Gauges + Hose - 50 ft.
4	5" Makita Grinders
2	4.5" Makita Grinders
1	Clear Visor
	Assorted Spare Grinding Disc's and Brushes
	Assorted Steel Wedges
2	Bottle Jacks and Chains
1	Rod Oven

WESTOVER- UNIT 71703

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector and Personal H2S
1	Fire Blanket/Case



WESTOVER - UNIT 71703 cont.

QTY	DESCRIPTION
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
1	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for <i>Timely Return to Work</i>
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
2	Infra Red Thermo - Meters
4	Traffic Cones
1	Q - Beam
1	FR Clothing
1	FR Raincoat

WESTOVER - UNIT 73003

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light



WESTOVER - UNIT 73003 cont.

QTY	DESCRIPTION
2	Reflective Vest
2	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for <i>Timely Return to Work</i>
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Socket Set
1	Post Hole Digger
1	Screwdriver Set
	Road Cones
1	200 ft. Tape Measure
1	Bumper Jack
3	Probes

WESTOVER - UNIT 78003

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
1	Flashing Amber Light
2	Reflective Vest
1	Shovel



WESTOVER - UNIT 78003 cont.

QTY	DESCRIPTION
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for <i>Timely Return to Work</i>
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Harness
1	Lanyard
1	APR (Full-Face)
1	Half Mask
1	100 ft. Tape
1	Digital Camera
4	Traffic Cones
1	Pair of Nomex Coveralls
1	Nomex Fleece Jacket

WESTOVER MOBILE EQUIPMENT EMERGENCY RESPONSE INVENTORY

MISCELLANEOUS

1	25 Ton Trailer, Float Trailer
1	Command Post Trailer
1	Light Plant
1	Foam Trailer
1	Gator 1 (old)
1	16' Tunnel Hull Jet Boat
1	Boat Trailer
1	16' Tunnel Hull Jet Boat
1	Boat Trailer
1	Oil Spill Trailer



WESTOVER - MISCELLANEOUS cont.

QTY	DESCRIPTION
1	Backhoe 4x4
1	Gator 2 (New)
1	Kubota Trailer
1	Emergency Response Trailer
1	SUV 4 x 4
1	SUV 4 x 4
1	Pickup Heavy-Duty 2 x 4, ¾ ton
1	Truck with Crane
1	TC-1663C Crane w/Single Personnel Bucket Attached to Freightliner FL-80 (Unit 731)
1	SUV
1	4 x 4 Pickup
1	¾ Ton 4 x 4 Pickup
1	4 x 4 Pickup Heavy-Duty, ¾ Ton
1	1 Ton Welding Pickup-Ext. Cab 4 x 4
1	Pickup 4 x 4, ½ Ton, Ext. Cab, 6.5 ft Box

WESTOVER - UNIT 100

40	3" x 4' Absorbent Socks
12	3" x 10' Absorbent Socks
48	Bags of Oclansorb
6	Bags of 17" x 19" Blue Pads
6	Bags of 17" x 19" White Pads
3	Bags of Industrial Peat Moss Absorbent
2	Rolls of 36" x 150' (Blue)
4	5" x 10' Absorbent Socks
8	3" x 10' Absorbent Socks
1	45 Gal. Drum
2	Pad Wringers
2	Ramps
2	Equipment Ramps
1	Windsock
6	10' x 3" Tiger Tails
1	10' Large Oil Absorbent Boom
7	1.5 Cubic Ft. Granular Multi-Zorb
6	18" x 3" Absorbent Sock
9	1.5 Cubic Ft. Universal Granular Multi-Zorb 2' Socks
6	8' Granular Absorbent Socks
9	2' Large Absorbent Socks
6	10' x 3" Tiger Tails
4	5 Gal. Pails Oil Clotter
16	1 Gal. Pails Oil Clotter
2	10' Large Oil Absorbent Boom
19	3" x 4' Tiger Tails (loose in bottom)



WESTOVER - UNIT 100 cont.

QTY	DESCRIPTION
8	Bundles of Rags
20	3" x 4' Tigers Tails (in Box)
100	16" x 18" x 3/8" Perforated Pads
50	3" x 18" Absorbent Socks

WESTOVER - UNIT 202

6	River Boom - O.S.C.A.R Mark XII 50 ft. Lengths
2	Boom Tow Bridle
2	Boom Tow Paravane
2	Boom Tow Sling - 3/8 Cable 25 ft. With Hooks
11	Handline Bridle
16	Drive in Pins - 4ft. With Wings
8	Screw Anchor
8	Rope - 1/2 Inch x 50 ft. Lengths (Yellow)
5	Rope - 1/2 Inch x 100 ft. Lengths (Green)
3	Rope - 1/2 Inch x 25 ft. - Snaps on Both Ends (Blue)
2	18 Inch Marker Buoy
3	20 lb. Mushroom Anchor
1	Wash Down Nozzle With 2 Inch Kamlock
1	2 Inch Female x 3 Inch Male Kamlock Adaptor
2	1500 Gal. Port-A-Tank Frame + Liners
2	1500 Gal. Port-A-Tank Liner - Extras
2	Port-A-Tank Hose Saddle
1	2 ft. Pedco Skimmer
1	Pair Pedco Skimmer Adaptors
1	Morris 11/24 Disc Skimmer With Powerpack
1	Honda ES6500 Generator
1	Set Wheel Chocks
1	Electric Winch
4	Floating Suction Hose 3" with 3" Fittings
2	Floating Suction Hose 3" with 2" Fittings
2	Suction Hose 2" with 2" Fittings
1	Adaptor - 2" Male x 3" Male Fittings
1	Adaptor - 3" Male x 3" Male Fittings
1	Adaptor - 3" Female x 3" Female Fittings
1	Adaptor - 3" Male Fitting
1	Adaptor - 2" male x 4" ABS Coupling
1	Bailing Bucket
2	Funnels
5	Life Jackets
1	First-Aid Kit
1	Stretcher
1	Splint Kit
6	Wool Blanket



WESTOVER - UNIT 202 cont.

QTY	DESCRIPTION
3	30 # Fire Extinguisher
1	50 ft. Extension Cord for 110 Power Supply
2	5 Gal. Jerry Cans
1	2 Inch Explosion Proof Electric Honda Pump
8	Wool Socks
1	Wind Socks - Large
10	Pylons - (MTO Approved)
9	Goggles
6	Waist Belts
3	Battery Flares
10	Safety Vests - (MTO Approved)
5	Towels
6	All Purpose Emergency Blankets
5	Winter Gloves
1	82 Inch Discharge Hose
3	3 Inch Discharge Hose
1	3 ft. Step Ladder
2	Shore Boom
30	Small Sorbent Booms
30	Oclandsord - Bags
1	Tool Box
1	Roll of Neoprene
2	Garden Rakes
2	Oil Fork
1	Neoprene Sledge Hammer
1	Axe
1	Chart - Boom Layout
4	Sewer Mats
1	Mega Phone
1	Command Vest
6	Hip Waders
2	Chest Waders
10	Self-Inflating Life Jackets - (Extra Cartridges - 5)
1	Flow Meter
1	Tarp 20' x 30'
1	Extension Ladder 20'
2	Danger Overhead Wire Signs
2	Sets of Mirrors - 2
1	Towing Bar for Pickup
1	Sway Control Bar
1	Set of Wheel Chocks
1	Hand Primer Kit for Electric Pump
2	Stop/Slow Signs
2	Lanyard
3	Full Body Harness



WESTOVER - UNIT 202 cont.

QTY	DESCRIPTION
3	30 # Fire Extinguisher
	P100 and P95 Respiratory Filters
1	Extension Cord
1	Fire Blanket
1	Box of 200 Ear Plugs
	W1-W75 Security Arm Bands
6	Battery Motorola Radio Charger
2	Boxes Nitrile Gloves
80	Reflective Arm/Leg Bands
3	Long Handled Shovels
1	Q-Beam Spot Light
	½ Mask Respirators
	½ Mask/Full Face Cartridges
	Tape - 200'
3	Cans Spray Paint (Orange)
2	Duct Tape (Rolls)
2	Caution Tape (Rolls)
12	Work Gloves (Pairs)
12	Gloves (White)
	Hand Cleaner Towels
	Bee Spray
10	Safety Glasses
1	Mechanics Wire (Roll)
2	Safety Lanterns and Extra Batteries
	Bird Scare Tape
	Hot/Warm and Cool Zone Flagging
1	Incident Command Organization Chart
2	Sets Towing Mirrors
4	Rolls Poly 6MM Plastic
2	Caution Training In Progress Signs
1	Yield to Oncoming Traffic Sign
2	Traffic Control Signs
1	Direction Arrow Sign
1	No Smoking Sign
6	S&E Guidelines for Contractors Handbook
1	Local Work Order Book
	Safe Work Permit
	JHA (Job Hazard Analysis)
	Safety Guideline for Contractors Checklist
	Incident Report
	Contractor's Tailgate/Toolbox Meeting Record
	Contractor's Site/Project Specific Orientation Record
	Dry Erase Markers
	Morris Industries Manual
	Trailer Ownership



WESTOVER - UNIT 202 cont.

QTY	DESCRIPTION
	Super Winch Manual
	Gorman-Rupp Pump Manual
	Equipment List Inventory

SARNIA EMERGENCY RESPONSE INVENTORY

14' STARCRAFT BOAT INVENTORY

3	Paddles
2	Life Jackets
1	9.9 Hp Motor
1	Gas Tank
1	Marine Safety Kit
1	Outboard Oil
4	Rope
1	Trailer
1	Ball Hitch
2	Ore Holders
2	Ratchet Straps
1	Standard Tool Kit
5	Motor Repair Tools
Valid	Insurance
Valid	License Sticker
Valid	Ownership

MISCELLANEOUS

1	White Trailer
1	Emergency Response Trailer
1	White Boom Truck
1	White Welding Truck
1	Foam Truck
1	White Pick-Up Truck
1	White Pick-Up Truck
1	White Pick-Up Truck
1	Grey Boat

SARNIA - UNIT 78104

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
1	Flags (Red Cloth)
1	Flashing Amber Light



SARNIA - UNIT 78104 cont.

QTY	DESCRIPTION
3	Reflective Vests
2	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for <i>Timely Return to Work</i>
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
10	No Trespassing Signs
1	Flare Gun Kit
5	Bags Multi-Purpose Ties
5	Rolls Marking Ribbon
4	Rolls Sealant Tape
4	AA Batteries
1	Container Fast Orange Wipes
2	Measuring Tapes
1	Disposable Camera
3	Probes
1	Sledge Hammer
1	Socket
1	Spark Plug Tool
1	Striker
1	Wire Brush
3	Utility Knives
1	Channel Lock
1	Clevice
1	Staple Gun



SARNIA - UNIT 78104 cont.

QTY	DESCRIPTION
2	Cans Never Cease
1	Roll Paper Towels
1	Ball Hitch
1	Pinto Hitch
11	Right-a-Way Signs
1	Windshield Washer Fluid
2	Bundles Rope
1	Cargo Net
1	Caution Tape (Roll)
4	Pylons
1	Oil Spill Kit

SARNIA - UNIT 095

3	River Boom O.S.C.A.R. Mark X11, 50' Lengths
1	Shore Boom (15' Lengths)
2	Boom Tow Bridle
2	Boom Tow Paravane
2	Boom Tow Sling, 3/8 Cable X 25' with Hooks
4	Drive-in Pin, 4' w/Wings
5	Screw Anchor
8	18" Marker Buoy
2	1/2" Chain X 20' w/Quick Links at Both Ends
1	Rope Reel
10	1/2" Rope X 50' (Yellow)
5	1/2" Rope X 25' w/Snap Both Ends (Blue)
3	1/2" Rope X 25' w/Snap One End (Blue)
4	3" Floating Suction Hose X 15'
2	2" Floating Suction Hose X 15'
2	2" Non-Floating Suction Hose X 15'
2	2" Non-Floating Suction Hose X 25'
3	2" Discharge Hose X 50'
1	3-Way Fluid Manifold
1	Wash Down Nozzle w/2" Kamlock Adaptor
3	3" Female X 2" Male Kamlock Adaptor
3	2" Female X 3" Male Kamlock Adaptor
1	1500 Gal. Port-a-Tank Frame
2	1500 Gal. Port-a-Tank Liner
2	Porta-Tank Hose Saddle
2	5 Gal. Jerry Can
1	2' Pedco Skimmer
1	Pedco Skimmer Adaptors (Pair)
1	Morris 1 1/4" Disc Skimmer
1	Skimmer Head (Serial # 1789)
1	Power Pak (Serial # B8012)



SARNIA - UNIT 095 cont.

QTY	DESCRIPTION
1	Hydraulic Hose
1	Discharge Hose
1	Tool Box
12	Life Jackets (6 Large, 6 Xlarge)
10	Inflatable Life Jackets
1	First-Aid Kit
1	Stretcher
1	Wool Blanket
1	30# Fire Extinguisher
6	Pairs Rubber Gloves
1	Bundle Cotton Gloves
1	Eyewash Station
1	Ear Plugs (Box)
26	Respirators (Assorted Sizes)
17	Cartridges (Organic Vapor in Pairs)
4	Boxes Particulate Filter
2	Boxes Filter Retainer
6	Chemical Splash Goggles
4	Safety Glasses
6	Pair Hip Waders
11	Orange Traffic Vests
10	Emergency Light Stickers
6	Safety Belt (for Tag Line Attachment)
11	Traffic Cones
1	Traffic Control Kit
1	50' Extension Cord
4	Ratchet Style Cargo Strap
2	Equipment Ramp
1	Honda ES6500c Generator, Serial #1191164
2	Sorbent Roll
4	Sorbent Boom (8' X 4')
1	Scoop Shovels with Holes
1	Sledge Hammer
1	Axe
2	Garden Rake
1	Round Nose Shovel
2	Emergency Blankets
1	Post Hammer
1	Bow Saw
1	Hydraulic Oil (Gal.)
1	Bull Horn
1	Air Horn
1	Book 7 Emergency Response Manual
1	Morris Skimmer Operation and Procedures Manual
1	Emergency Response Organization Chart



SARNIA - UNIT 095 cont.

QTY	DESCRIPTION
1	Windsock (Trailer Mounted)
1	Windsock (Portable)
2	<i>Men At Work</i> signs (Vinyl Rollup)
2	<i>Men At Work</i> signs (Metal Roadside)
2	Caution; Training Exercise Signs
1	3-Sided Danger Keep Away Sign
3	Duct Tape (Rolls)
3	Caution Tape (Rolls)
3	Marker Ribbon (Rolls)
1	Pitch Fork
3	Pitch Fork with Wire Mesh
1	FP101 Global Flow Probe (Water Speed Meter)
50	Orange Numbered Reflective Armbands #'s 1-50

SARNIA - UNIT 180

3	River Boom O.S.C.A.R. Mark X11, 50' Lengths
3	Screw Anchor
1	Rope Reel
5	½" Rope X 100' (Green)
2	½" Rope X 25' w/Snap Both Ends (Blue)
2	½" Rope X 25' w/Snap One End (Blue)
3	2' Non-Floating Suction Hose X 12'
1	1500 Gal. Port-a-Tank Frame
1	1500 Gal. Port-a-Tank Liner
1	Elastek Drum Skimmer
1	Elastek Hydraulic Powerpak
1	Elastek Hydraulic Lines (Kit)
1	Elastek Hydraulic Pump
6	Life Jackets (D.O.T. Approved Adult PFD's)
12	Traffic Cones
1	Traffic Control Kit
1	50' Extension Cord
2	Emergency Blankets
1	Post Hammer
1	Sledge Hammer
1	Scoop Shovel with Holes
1	Pitch Fork
1	Pitch Fork with Wire Mesh
1	Garden Rake
1	Universal Wide Fender Mirrors (Set)
25	Orange Reflective Numbered Armbands (51 to 75)



SARNIA - UNIT 707

QTY	DESCRIPTION
1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/ Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
2	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
6	Warning Reflector
1	Back-up Alarm
2	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for Timely Return to Work
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
2	Raid
1	Container Hand Cleaning Wipes
3	Marking Ribbon (Rolls)
1	Drivers Log
3	Rain Coats
1	Bottle Windshield Washer Fluid
3	Harness Hookups
1	Snow Brush
1	Set Bama Feet Warmers
1	Flare Gun Kit
1	Oil Spill Kit



SARNIA - UNIT 707 cont.

QTY	DESCRIPTION
2	Paper Towels (Rolls)
2	Duct Tape (Rolls)
100	Garbage Bags
1	Package Whip-it Wipes
1	Container Hand Cleaning Towels
3	Wire (Rolls)
1	Can Grease
1	Can Oil
2	Saran Wrap (Rolls)
1	Wheel Chock
4	Outrigger Mats
1	Towing Strap 6" by 30
3	Measuring Tapes
20	CleVICES
1	Cheater Bar (Strap Tightener)
2	Cans Low Friction Lubricant
1	Can Kleen Start
1	Can Wire Rope Lubricant
1	Pry Bar
4	Allan Wrench Sets
33	Lifting Slings
5	Ratchet Straps
9	Lifting Eyes
1	Plate Lifter
1	Grease Gun
1	Replacement Strap
3	Ropes with Hooks
3	Lifting Chains
2	Chains
1	Oil Spill Control Manual

SARNIA - UNIT 709

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/ Case
2	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
4	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit



SARNIA - UNIT 709 cont.

QTY	DESCRIPTION
1	Tire Jack
1	Vehicle Recovery Strap
5	Warning Reflector
1	Back-up Alarm
3	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for <i>Timely Return to Work</i>
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Container Fast Orange Wipes
1	Oil Spill Control Manual
2	5" Grinding Wheels (Boxes)
2	Half-Mask Respirators
1	100 ft Measuring Tape
1	Windsock
5	Paper Towels (Rolls)
2	Cans Great Stuff (Foam Sealing)
1	CMI-100 Clamp-On Meter
2	Wire Brush
1	Can Armour-All
1	PLM Field Guide
3	Extension Cords
1	Set Heavy Duty Cable Connectors
1	300A Welding Ground Clamp
1	Temporary Conditions Field Edition
4	Rain Coats
5	Wire Wheel Brush 5"
2	Welding Strikers
1	Can Lysol Disinfectant Spray
2	Cans Flint for Striker
1	U-Bolt
2	H ₂ S Detector



SARNIA - UNIT 709 cont.

QTY	DESCRIPTION
18	Marking Ribbon (Rolls)
3	Electrical Tape (Rolls)
1	Face Shield
2	Welding Helmets
1	1 1/4" - 3/8" Wrench Set
2	Jacks
1	Level
2	Extra Floor Mats
2	Sledge Hammers
1	Square
1	Hack Saw
2	Magnetic Ground Clamps
2	Grinders
2	Power Brushes
1	Chipping Hammer
1	File
2	Pry Bars
1	Shortstub Head Assembly
4	Tape Measures
51	Loose Grinding Discs
2	Utility Knives
1	Welding Tarp
2	Pressure Regulators
1	Microwave
2	Trailer Hitches
2	Chains
2	Ratchet Straps
1	Nomex Pants (Pair)
1	Nomex Coat
1	Nomex Coveralls (Pair)
1	Indura-Ultrasoft Coveralls (Pair)
1	Can WD-40
1	Can Off Bug Spray
1	Caution Tape (Roll)
8	Bottles Oil
2	Pipe Measurers
1	Duct Tape (Roll)
1	Bottle Invisi-Lube
1	Can Never-Cease
11	Boxes Welding Rods (Electrodes)
1	Cocking Gun
1	Knee Pads (Pair)
6	Welding Gloves (Pairs)
11	Pieces Chalk
1	String



SARNIA - UNIT 709 cont.

QTY	DESCRIPTION
1	Chalk Line
1	Centering head tool
1	Box Welders Eye Ease
1	Burr Grinder
1	Caliper
1	Compass
2	Plumbob's
2	Clasps
1	Wire (Roll)
2	Tin Snips
1	Bottle Windex
1	Bottle Raid
1	Bottle Fantastik
1	Can Grease
1	Funnel
1	Package Whip-It Wipes
1	Arc Welder
1	Bench Clamp
3	Oxyacetylene Hoses
1	Oxygen Tank
1	Acetylene Tank
2	Probes
2	Snow Brushes/ Scrapers
5	Lengths Rope
1	Electrode Holder
3	Replacement Face Shields
1	Flare Gun Kit
1	Oil Spill Kit
1	Tarp
1	Light Stand
2	Heavy Duty Lights
4	Plug Adaptors
1	Welders Tool Support
1	Sling
1	Ground Cable-100ft
1	Stinger Cable-100ft
1	Current Adjustment Cable
2	500 Watt Halogen
6	Packages of Ear Plugs

SARNIA - UNIT 727

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector



SARNIA - UNIT 727 cont.

QTY	DESCRIPTION
1	Fire Blanket/ Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
1	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for <i>Timely Return to Work</i>
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Oil Spill Control Manual
1	Marking Ribbon (Roll)
1	Recall Bandage
1	Company Credit Card
1	Drivers Daily Log
1	Warranty Book

SARNIA - UNIT 75005

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/ Case
1	30# Fire Extinguisher (Dry Chemical)



SARNIA - UNIT 75005 cont.

QTY	DESCRIPTION
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
1	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
1	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for <i>Timely Return to Work</i>
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Sledge Hammer
4	Pylons
3	Probes
1	Bundle of Stakes
1	Hack Saw
1	Fencing Pliers (Pair)
4	Locks
1	Spare Hack Saw Blade
2	Pry Bars
3	Clevises (4¾ T, 1½ T, 1½ T)
1	Utility Knife
14	Marking Ribbon (Rolls)
1	Staple Gun
1	Box Staples
3	Wood screws (Boxes)
3	Measuring Tape



SARNIA - UNIT 75005 cont.

QTY	DESCRIPTION
1	Can Never-Cease
1	Striker
2	Sealant Tape (Rolls)
1	Pipe Sealant with Teflon
1	Bottle Starting Fluid
3	Duct Tape (Rolls)
1	Wire Brush
1	Pinto Hitch
18	Enbridge Signs
15	Locate Signs
1	Channel Lock
1	Oil Spill Kit
2	Rain Coat
1	Ball Hitch 2 5/16"
1	Can Grease
2	Cans Spray Paint
2	Bottles Penetrating Oil
40	Reflector Discs
1	Rock Shield
1	Cargo Net
1	Roll Caution Tape
1	Bottle Citrus Hand Cleaner
1	Bottle Oil
1	Bundle Rope
1	Windshield Washer Fluid
1	Container Fast Orange Wipes
1	Flare Gun Kit
1	Adaptor
4	Reflector Arm Bands
1	Bottle Hand Cleaner
1	Disposable Camera

SARNIA - UNIT 77806

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/ Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
2	Reflective Vest
1	Shovel
1	Spare Tire



SARNIA - UNIT 77806 cont.

QTY	DESCRIPTION
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
Valid	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
1	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for <i>Timely Return to Work</i>
1	Injury, Incident & Accident Reporting Responsibilities
1	Case Safety Glasses
2	Rain Coats
1	Q Beam Flashlight
3	Half-Face Piece Masks
2	Measuring Tapes
1	Company Credit Card
1	Auto Log Book
1	PLM Field Book
1	Disposable Camera



Manhattan Facility - PROPOSED BOOM TRAILER (2/4/2010)	
QTY	DESCRIPTION
5 Bales	Oil Sorbent Pads
200'	Absorbent Boom
500'	Floating Boom
1	3" Diaphragm Pump
1	Skim Pak Weir Skimmer
50'	Discharge Hose
50'	Suction Hose
10 Pairs	Hip Boots
10 Sets	Neoprene Gloves
10	FR Rain Gear- Jackets & Bibs
100'	River Boom
10	High Visibility Vests
1 Roll	Caution Tape
1	Portable Generator
1	Air Horn
4	Shovels
1	Sledge Hammer
1	Axe
12	Steel Fence Posts
1 Roll	Plastic Fencing
4	Miller Life Lines
4	Miller Harnesses
10	Steel Toe Chest Waders
10	Life Vests
	KamLock Fittings
1	MegaPhone
1	Fence Post Driver
1	8' X 20' Trailer; Cargo-Mate Tandem Axle; Model# BL820TA2 (Overall Length 23'10"); Width 8' 6", Inside Height 6' 7"; Double Rear Doors
Manhattan Facility - PROPOSED LEAK- EMERGENCY RESPONSE TRAILER (2/4/2010)	
QTY	DESCRIPTION
4	30# Fire Extinguishers
4	Body Harnesses
1	Fire Blanket
2	Wind Socks
10 Pairs	Hip Boots
10 Sets	Neoprene Gloves
10	FR Coveralls
10	FR Rain Gear- Jackets & Bibs
2	Scott Air Paks
1	First Aid Kit
5 Bales	Oil Sorbent Pads
200'	Absorbent Pads
10	High Visibility Vests
1 Roll	Caution Tape
1	Portable Generator
1	Air Horn
4	Shovels
1	Sledge hammer



Manhattan Facility ER Trailer cont.	
QTY	DESCRIPTION
1	Axe
12	Steel Fence Posts
1 Roll	Plastic Fencing
1	3" Diaphragm Pump
1	3" Trash Pump
50'	Suction Hose
	KamLock Fittings
50'	Discharge Hose
2	Handheld Spotlight
4	Lights with Stand
4	Road Barricades
1	Stretcher
2	Wool Blankets
5	Face Shields
5	Aprons
5	Sleeve Protectors
10	Traffic Safety Cones
1	Fence post Driver
1	8' X 20' Trailer- Cargo-Mate Tandem Axle; Model #BL820TA2; Overall Length 23'10"; Width 8' 6"; Inside Height 6' 7"; Double Rear Doors



QUALIFIED INDIVIDUALS NOTIFICATION

As per the National Preparedness for Response Exercise Program (PREP) guidelines, a Qualified Individual (QI) notification drill is performed 4 times per year (quarterly). During these quarterly drills, contact is made from the Control Center via telephone, radio, or pager to the Qualified Individual or their designate in the Chicago Region to ensure they can be reached to carry out their duties in the event of a spill response emergency. Confirmation of receipt of the contact must be made by the QI back to the Control Center to validate the drill.

Documentation for these drills is filed in the Control Center and in Chicago, Illinois Regional office.

T.W. Fridel
General Manager, Chicago Region
1500 W. Main St.
Griffith, IN 46319
Business: 219
Business FAX: 219-9
24 hr. contact: 800-858-5253 via Edmonton Control Center

EMERGENCY RESPONSE TRAINED PERSONNEL

Enbridge employees are trained for emergency response according to the OSHA 1910.120 Hazardous Waste Operations and Emergency Response (HAZWOPER) standard. Depending on their job classification, employees receive training in first responder awareness, first responder operations, hazardous material technicians, hazardous material specialists, incident commander, support and clerical staff. Employees receive an 8 hour annual refresher as required by the standard.

As per the National Preparedness for Response Exercise Program (PREP) guidelines, company initiated tabletop exercises, equipment deployment exercises, and unannounced deployment exercises are performed and documented annually. Company personnel also participate in industry lead emergency response exercises as well as local exercises throughout our system.

The following chart reflects the number of annually HAZWOPER trained Enbridge employees by response zone:

Superior Region Response Zone	Chicago Region Response Zone	Cushing Region Response Zone	Enbridge Pipelines North Dakota Response Zone
110	112	52	40

In addition, internal response resources are supplemented by contract staff supplied by pre determined agreements with Oil Spill Response Organizations (OSRO's) and other local contractors. In many instances these resources are response zone specific and contact information is listed in the Enbridge Emergency Response Directory.

Appendix



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Qualified Individual(s)

T.W. Fridel
General Manager, Chicago Region
1500 W. Main St.
Griffith, IN 46319
Business: 219-
Business FAX: 219-
24 hr. contact: 800-858-5253 via Edmonton Control Center

M.J. Willoughby
General Manager, Superior Region
119 N. 25th St. E.
Superior, WI 54880
Business: 715-
Business FAX: 715-
24 hr. contact: 800-858-5253 via Edmonton Control Center

CHICAGO REGION RESPONSE ZONE

The Enbridge Liquids Pipeline System (Lakehead System) consists of four response zones. These response zones represent the regional boundaries designated in the normal operating structure. The response zones include:

- Superior Region
- **Chicago Region**
- Cushing Region
- Enbridge Pipelines North Dakota

The Chicago Region response zone includes eleven pipelines (Lines 6A, 13, 14, 61, 62, 64, 6B, 5, 10, 17, and Mustang) and three terminal lines (Lines TL 1, GFHT 2 and GFHT 3) that transport crude oil, natural gas liquids Wisconsin, Illinois, Indiana, Michigan and New York. Line 13 transports diluent across Illinois, Wisconsin, Minnesota and the North Dakota systems. This section of response zone includes:

- Approximately 2,108 miles of pipeline, with pipe diameters ranging from 12 to 42 inches;
- 42 Pump Stations located along the pipe;
- The Mustang pipeline segment for which Enbridge has operations, maintenance, repair and emergency response responsibility includes the Lockport Metering Station and the portion of the Mustang 24" pipeline system from Lockport, Illinois to Interstate 74;



- Line 17 – Enbridge operates the 88 mile pipeline segment beginning in Stockbridge, Michigan and ending in Oregon, Ohio. The first 35 miles of pipeline, from Stockbridge, Michigan to Freedom Junction, Michigan was constructed in 1998 and is owned by Enbridge. The remaining 53 mile segment runs from Freedom Junction, Michigan to Oregon, Ohio (MP is leased from Wolverine Pipeline). Per the established lease agreement, Enbridge is responsible for all operations, maintenance and emergency response associated with this line segment (as if we were the owner); however, Wolverine retains ownership.
- The Chicago system also includes 25 tanks (11 tanks at Griffith; 9 tanks at Hartsdale; 3 tanks at Stockbridge, 2 tanks at Manhattan). Breakout tanks are located at Griffith, IN (2.84 million barrels storage capacity), Hartsdale, IN (846,000 barrels storage capacity) Stockbridge, MI (440,000 barrels storage capacity), and two diluent tanks at Manhattan (511,000 barrels storage capacity).



Counties included in the Chicago Region response zone are:

Wisconsin	Illinois	Indiana	Michigan	New York
Rusk	McHenry	Lake	Crawford	Erie
Taylor	Kane	Porter	Ogemaw	
Chippewa	Cook	LaPorte	Arenac	
Clark	Dupage	St. Joseph	Bay	
Marathon	Kendall		Lapeer	
Wood	Will		St. Claire	
Adams	Kankakee		Berrion	
Marquette	Ford		Cass	
Columbia	Livingston		St. Joseph	
Dane	Champaign		Kalamazoo	
Jefferson	Piatt		Calhoun	
Rock	Boone		Livingston	
Walworth	DeKalb		Oakland	
	LaSalle		Tuscola	
	Grundy		Sagionaw	
	Will		Oscoda	
			Macomb	
			Ingham	
			Jackson	
			Washtenaw	



This response zone includes the following pipelines:

Line	Pipeline Sections	Begin Stationing	End Stationing	Miles	Pipeline Diameter	Product
5	Lewiston Pump Station to Sarnia, Ontario	2,378,371	3,364,529	186.77	30"	Crude Oil & Natural Gas Liquids
6A	Hwy 8 Ladysmith, WI to Mokena, IL	513,368	2,457,347	368.2	34"	Crude Oil & Natural Gas Liquids
6B	Griffith, IN to Sarnia, Ontario	0	1,509,516	285.9	30"	Crude Oil
10	Westover, Ontario to Grand Island, NY	0	3,484	.7	12"	Crude Oil
10	Grand Island, NY to East Niagara, NY	3,484	29,409	4.9	20"	Crude Oil
10	East Niagara, NY to Kiantone, NY Take-Off	29,409	119,975	17.3	12"	Crude Oil
13	Streator, IL to Manhattan, IL	0	237,710	45.02	20"	Diluent
13	Manhattan, IL to Delevan, WI	0	889,310	168.43	20"	Diluent
13	Delevan, WI to Ladysmith, WI	528,000	1,216,611	230.42	20"	Diluent
14	Hwy 8 Ladysmith, WI to Mokena, IL	512,719	2,434,861	364.0	24"	Crude Oil
17	Stockbridge, MI to Freedom Junction, MI	0	186,089	35.3	16"	Crude Oil
17	Freedom Junction, MI to Toledo, OH	0	279,047	52.9	16"	Crude Oil
61	Ladysmith, WI to Delevan, WI	523,170	1,703,457	223.54	42"	Crude Oil
61	Delevan, WI to LaSalle Livingston County Line	0	467,030	88.45	42"	Crude Oil
62*	IN State Line to Hartsdale, IL	363,296	398,336	6.5	22"	Crude Oil
64	Mokena, IL to Griffith, IN	2,406,091	2,543,685	26.1	24"	Crude Oil
TL1	Griffith, IN to Hartsdale, IN	0	3,171	.6	34"	Crude Oil
GFHT 2	Griffith, IN to Hartsdale, IN	0	4,090	.8	36"	Crude Oil
GFHT 3	Griffith, IN to Hartsdale, IN	0	4,128	.8	36"	Crude Oil
Mustang	Lockport Metering Station, IL to North of Interstate 74	0	10,001	1.9	18"	Crude Oil

* Stationing used is not As-Built- Begins at zero in Flanagan



3. CONSISTENCY WITH NATIONAL AND AREA CONTINGENCY PLANS

National Contingency Plan

Enbridge (U.S.) Inc. has reviewed the National Contingency Plan to ensure our emergency response planning and structure is consistent. The Incident Command Structure established for Enbridge assumes Enbridge, as a “responsible party” will work in a “unified command structure” with local, state and/or federal agencies to manage the emergency.

The Enbridge Emergency Response Plan (ERP) adheres to all Federal, State and Local emergency response requirements for the crude oil pipeline transportation industry. This section of the appendix was developed to address specific protocol questions common to ERP requirements.

Enbridge identifies the technical training and qualification standards for operations employees in accordance with company policy, industry standards, and applicable government regulations. For the Liquid Pipeline side, these can be found in our Operations and Maintenance Procedures (O&MP) Book 1 Tab 5 – Training and Qualifications. For the Gathering Systems, this can be found in Gathering Systems O&MP Section 4. Specifically:

1. Characteristics and hazards of oil: This training is conducted annually during HAZWOPER refresher training, specifically in the hazardous materials and Material Safety Data Sheet (MSDS) training components.
2. Conditions that are likely to worsen emergencies, including the consequence of facility malfunctions or failures and appropriate corrective actions: These are covered in our O&MP Books 7 both General & Region Specific under the High Consequence Areas (HCA) identified On individual maps and covered as part of the Emergency Response Training.
3. Steps necessary to control an accidental discharge of oil: Training on general operations procedures cover the precautions to prevent discharges and reviewed during our annual table-top exercises, field exercises and HAZWOPER training.
4. Steps necessary to minimize the potential for fire, explosion, or environmental damage: Covered in annual ignition source, HAZWOPER and emergency response training.
5. Proper firefighting procedures and use of personal protective equipment (PPE), fire fighting procedures or extinguisher use is provided within three months of initial hire or before an individual is assigned to a specific response position and every three years thereafter. PPE training is covered in annual refresher training for all employees.



Additional Comments:

The Enbridge O&MP Book 2 section 15-02-01, which covers specific duties in the Emergency Response Training Matrix (Table 2), and O&MP Book 7 section 02-01-01 Overview of Emergency Response Actions, address the appropriate levels of training and the requirements specified in OSHA 29 CFR 1910.120.

The O&MP Book 2 section 04 describes the company's procedures for maintenance of response training records for response personnel.

The O&MP Book 2 section 05-02-02 describes the requirements for maintaining drill documentation for three years and ensuring the availability of such records for inspectors.

Area Contingency Plan

Enbridge has reviewed the applicable Area Contingency Plans and established communication, where necessary, with the appropriate Area Contingency Plan coordinator to ensure that Enbridge information is accurate. Enbridge will, on an on-going basis, continue to review these plans, provide input as necessary and participate in the Area Committees as appropriate. The identification of environmentally sensitive (high consequence areas) will be reviewed with Area Contingency Plans in order to establish consistency.

The Area Contingency Plans that must be considered within Enbridge's Emergency Response Plan have been identified and are listed below according to the response zone affected.

Chicago Response Zone

USCG		EPA	
National Response Center http://www.nrc.uscg.mil/nrchp.html	800-424-8802	EPA Region II 290 Broadway New York, NY 10007-1866	212-637-5000
USCG Ninth District 1240 E. 9 th Street Cleveland, OH 44199	216-902-2045	EPA Region V 77 W. Jackson Blvd. Chicago, IL 60604	312-886-3000
USCG Marine Safety Office 1 Fuhrmann Blvd. Buffalo, NY 14203	716-843-9570		
USCG Marine Safety Office 215 West 83 rd St., Ste. D Burr Ridge, IL 60527	630-986-2155		
USCG Marine Safety Office 110 Mt. Elliott Ave. Detroit, MI 48207-4380	313-568-9490		
USCG Marine Safety Office 2424 S. Lincoln Memorial Dr. Milwaukee, WI 53207	414-747-7154		



4. Calculation of Worst Case Discharge

Worst Case Discharge Volume Calculation Methodology

The approach for calculating Worst Case Discharge (WCD) volume utilizes American Innovation's Integrity Assessment Program (IAP) software. The IAP model performs two calculations to determine the total volume out at any given point along the pipeline in the event of a rupture; maximum initial and maximum stabilization loss.

The calculations used to determine the worst case discharge volume use:

- An assumption of a guillotine rupture (100% volume out)
- Design pipeline capacity to determine the amount of product released prior to a rupture being isolated by closure of remote-controlled mainline valves
- An assumption that all of the product in the pipe except that isolated by either elevation or the location of existing remote-controlled valves will be discharged at a rupture location.

This yields a conservative estimate of the worst case discharge volume regardless of weather conditions.

IAP software and data is in custody of, and maintained by the Enbridge Liquid Pipelines Operational Risk Management Group.

Maximum Initial Loss

Initial volume out is the amount of product that is released before a pipeline is shutdown and remote-controlled isolation valves closed in vicinity of the rupture.

Maximum Initial Loss

= pipeline flow rate x (time to recognize rupture and isolate the pipeline)

Time to Recognize Rupture

A full mainline rupture will show up as alarms on SCADA screens within 1 minute of its occurrence.

The Material Balance Leak Detection will recognize a rupture within 5 minutes of a rupture occurring (runs in a 5 minute cycle). The Material Balance Leak Detection is a backup to operator recognition.

The volume out calculation uses a time to recognize rupture of 5 minutes.

Valve Closure Rate

All motor operated valves in the Enbridge liquid mainline system close in three minutes or less. This is a design criteria requirement for motorized mainline valves used by Enbridge.



Time to Isolate Line (Remote Controlled Valves Only)

The time to isolate a line is the time it takes to recognize the rupture plus the time it takes to close the remote-controlled mainline valves. For the Enbridge liquid mainline system this time is 8 minutes.

Maximum Stabilization Loss

The maximum stabilization loss is a worst case calculation of the amount of oil that will escape to ground after isolation has occurred. The calculation takes into consideration the outer diameter and wall thickness of the pipe, the pipeline elevation profile, and the location of remote-controlled valves.

Worst Case Discharge Volume

Worst Case Discharge (WCD) Volume= Maximum Initial Loss + Maximum Stabilization Loss

Calculation of Worst Case Discharge for Mainline Piping

Line	Design Flow Rate Capacity (bbls/day)	Time to Isolate (min)	Worst Case Discharge (bbls)	Location (ft Stationing)	Location (~MP)
5	525,682	8	36,263	2,843,834	1,636.45
6A	727,335	8	25,283	2,446,200	463.4
6B	300,653	8	26,456	1,425,000	735.4
10	80,824	8	2,497	10,700	1,930.8
13	180,000	8	7,945	551,100	104.4
14	398,774	8	19,467	2,289,400	433.8
Toledo 17	103,781	8	7,792	175,632	33.2
61	400000	8	34,717	988,450	187.2
62	139,822	8	14,868	234,200	
64	398,774	8	8,511	2,531,400	463.8
(transfer line) TL1	317,860	8	3,332	3024	
(transfer line) TL2	363,080	8	2,379	2713 to 3913	
(transfer line) TL3	363,080	8	2,379	2713 to 3913	

Calculation of Worst Case Discharge for Tankage

Prevention Measure	Standard	Credit (percent)
Secondary containment > 100%	NFPA 30	50
Built/repared to API standards	API STD 620/650/653	10
Overfill protection standards	API RP 2350	5
Testing/cathodic protection	API STD 650/651/653	5
Tertiary containment/drainage/treatment	NFPA 30	5
Maximum allowable credit		75

25% of largest tank in Chicago Region = 390,000 x 25% (75% RSPA credit) = 97,500 bbls



5. Identification of Environmentally Sensitive Areas

Enbridge utilizes the criteria described in its integrity management plan (HCA Management Plan) to identify and evaluate varying degrees of sensitivity to a number of public safety and environmental concerns along its right-of-way.

Spatial data regarding the HCA sites were derived from the National Pipeline Mapping System (NPMS) database maintained by PHMSA and mapped using the Geographic Information System (GIS) software ESRI (Environmental Systems Research Institute) ArcMap. In addition to the HCA's identified by PHMSA, Enbridge considered the following features in its Unusually Sensitive Area assessment:

- Rivers identified as high volume areas
- Additional drinking water resources
- Environmentally sensitive areas identified through regional or field knowledge

In addition, HCA's were identified that may be affected by a release from Enbridge pipelines via transport mechanisms. The types of transport mechanisms considered were:

- Overland flow of crude oil to an HCA which is a function of topographic gradients, locations of ditches, and barriers to flow, in addition to stationing-specific volumes of crude oil that could be potentially released from an Enbridge pipeline.
- Flow of crude oil with/on water to an HCA from static lakes and ponds or perennial streams
- Spray of crude oil from a potential rupture to an HCA

The Enbridge HCA maps are an integral part of Enbridge emergency planning and response and are distributed to the Enbridge Regional Offices. The HCA maps are available upon request.

6. Basis for Determination of “Significant and Substantial Harm”

Enbridge has determined that the Chicago Response Zone meets the criteria that requires the zone to be considered as having the potential to cause “significant and substantial” harm.



1. OPERATOR IDENTIFICATION

Enbridge (U.S.) Inc.
Operates the Enbridge Energy, Limited Partnership Pipeline System
1100 Louisiana, Suite 3200
Houston, TX 77002-5216
(713) 650-8900 (Phone Number)
(800) 858-5253 (24 hr. Emergency Number)
(713) 653-8711 (Fax)

2. RESPONSE ZONE DESCRIPTION

The Enbridge Liquids Pipeline System (Lakehead System) consists of four response zones. These response zones represent the regional boundaries designated in the normal operating structure. The response zones include:

- Superior Region
- **Chicago Region**
- Cushing Region
- Enbridge Pipelines North Dakota

CHICAGO REGION RESPONSE ZONE

The Chicago Region response zone includes eleven pipelines (Lines 6A, 13, 14, 61, 62, 64, 6B, 5, 10, 17, and Mustang) and three terminal lines (Lines TL 1, GFHT 2 and GFHT 3) that transport crude, natural gas, and diluent liquids across Wisconsin, Illinois, Indiana, Michigan and New York. This section of response zone includes.

- Approximately 2,177.47 miles of pipeline, with pipe diameters ranging from 12 to 42 inches;
- 42 Pump Stations located along the pipe;
- The Chicago system also includes 23 tanks (11 tanks at Griffith; 9 tanks at Hartsdale; 3 tanks at Stockbridge). Breakout tanks are located at Griffith, IN (2.84 million barrels storage capacity), Hartsdale, IN (846,000 barrels storage capacity) and at Stockbridge, MI (440,000 barrels storage capacity).



Counties included in the Chicago Region response zone are:

Wisconsin	Illinois	Indiana	Michigan	New York
Rusk	McHenry	Lake	Crawford	Erie
Taylor	Kane	Porter	Ogemaw	
Chippewa	Cook	LaPorte	Arenac	
Clark	Dupage	St. Joseph	Bay	
Marathon	Kendall		Lapeer	
Wood	Will		St. Claire	
Adams	Kankakee		Berrion	
Marquette	Ford		Cass	
Columbia	Livingston		St. Joseph	
Dane	Champaign		Kalamazoo	
Jefferson	Piatt		Calhoun	
Rock	Boone		Livingston	
Walworth	DeKalb		Oakland	
	LaSalle		Tuscola	
	Grundy		Sagionaw	
	Will		Oscoda	
			Macomb	
			Ingham	
			Jackson	
			Washtenaw	



3. CONSISTENCY WITH NATIONAL AND AREA CONTINGENCY PLANS

National Contingency Plan

Enbridge (U.S.) Inc. has reviewed the National Contingency Plan to ensure our emergency response planning and structure is consistent. The Incident Command Structure established for Enbridge assumes Enbridge, as a “responsible party” will work in a “unified command structure” with local, state and/or federal agencies to manage the emergency.

The Enbridge Emergency Response Plan (ERP) adheres to all Federal, State and Local emergency response requirements for the crude oil pipeline transportation industry. This section of the appendix was developed to address specific protocol questions common to ERP requirements.

Enbridge identifies the technical training and qualification standards for operations employees in accordance with company policy, industry standards, and applicable government regulations. For the Liquid Pipeline side, these can be found in our Operations and Maintenance Procedures (O&MP) Book 1 Tab 5 – Training and Qualifications. For the Gathering Systems, this can be found in Gathering Systems O&MP Section 4. Specifically:

1. Characteristics and hazards of oil: This training is conducted annually during HAZWOPER refresher training, specifically in the hazardous materials and Material Safety Data Sheet (MSDS) training components.
2. Conditions that are likely to worsen emergencies, including the consequence of facility malfunctions or failures and appropriate corrective actions: These are covered in our O&MP Books 7 both General & Region Specific under the High Consequence Areas (HCA) identified On individual maps and covered as part of the Emergency Response Training.
3. Steps necessary to control an accidental discharge of oil: Training on general operations procedures cover the precautions to prevent discharges and reviewed during our annual table-top exercises, field exercises and HAZWOPER training.
4. Steps necessary to minimize the potential for fire, explosion, or environmental damage: Covered in annual ignition source, HAZWOPER and emergency response training.
5. Proper firefighting procedures and use of personal protective equipment (PPE), fire fighting procedures or extinguisher use is provided within three months of initial hire or before an individual is assigned to a specific response position and every three years thereafter. PPE training is covered in annual refresher training for all employees.



Additional Comments:

The Enbridge O&MP Book 1 section 05-02-02, which covers specific duties in the Emergency Response Training Matrix, and O&MP Book 7 section 02-01-01 Overview of Emergency Response Actions, address the appropriate levels of training and the requirements specified in OSHA 29 CFR 1910.120.

The O&MP Book 1 section 04 describes the company's procedures for maintenance of response training records for response personnel.

The O&MP Book section 05-02-02 describes the requirements for maintaining drill documentation for 3 years and ensuring the availability of such records for inspectors.

Area Contingency Plan

Enbridge has reviewed the applicable Area Contingency Plans and established communication, where necessary, with the appropriate Area Contingency Plan coordinator to ensure that Enbridge information is accurate. Enbridge will, on an on-going basis, continue to review these plans, provide input as necessary and participate in the Area Committees as appropriate. The identification of environmentally sensitive (high consequence areas) will be reviewed with Area Contingency Plans in order to establish consistency.

The Area Contingency Plans that must be considered within Enbridge's Emergency Response Plan have been identified and are listed below according to the response zone affected.

Chicago Response Zone

USCG		EPA	
USCGv Ninth District 1240 E. 9 th Street Cleveland, OH 44199	216-902-2045	EPA Region II 290 Broadway New York, NY 10007-1866	212-637-5000
USCG Marine Safety Office 1 Fuhrmann Blvd. Buffalo, NY 14203	716-843-9570	EPA Region V 77 W. Jackson Blvd. Chicago, IL 60604	312-886-3000
USCG Marine Safety Office 215 West 83 rd St., Ste. D Burr Ridge, IL 60527	630-986-2155		
USCG Marine Safety Office 110 Mt. Elliott Ave. Detroit, MI 48207-4380	313-568-9490		
USCG Marine Safety Office 2424 S. Lincoln Memorial Dr. Milwaukee, WI 53207	414-747-7154		



4. Calculation of Worst Case Discharge

Worst Case Discharge Volume Calculation Methodology

The approach for calculating Worst Case Discharge (WCD) volume utilizes American Innovation's Integrity Assessment Program (IAP) software. The IAP model performs two calculations to determine the total volume out at any given point along the pipeline in the event of a rupture; maximum initial and maximum stabilization loss.

The calculations used to determine the worst case discharge volume use:

- An assumption of a guillotine rupture (100% volume out)
- Design pipeline capacity to determine the amount of product released prior to a rupture being isolated by closure of remote-controlled mainline valves
- An assumption that all of the product in the pipe except that isolated by either elevation or the location of existing remote-controlled valves will be discharged at a rupture location.

This yields a conservative estimate of the worst case discharge volume.

IAP software and data is in custody of, and maintained by the Enbridge Liquid Pipelines Operational Risk Management Group.

Maximum Initial Loss

Initial volume out is the amount of product that is released before a pipeline is shutdown and remote-controlled isolation valves closed in vicinity of the rupture.

Maximum Initial Loss

= pipeline flow rate x (time to recognize rupture and isolate the pipeline)

Time to Recognize Rupture

A full mainline rupture will show up as alarms on SCADA screens within 1 minute of its occurrence.

The Material Balance Leak Detection will recognize a rupture within 5 minutes of a rupture occurring (runs in a 5 minute cycle). The Material Balance Leak Detection is a backup to operator recognition.

The volume out calculation uses a time to recognize rupture of 5 minutes.

Valve Closure Rate

All motor operated valves in the Enbridge liquid mainline system close in three minutes or less. This is a design criteria requirement for motorized mainline valves used by Enbridge.



Time to Isolate Line (Remote Controlled Valves Only)

The time to isolate a line is the time it takes to recognize the rupture plus the time it takes to close the remote-controlled mainline valves. For the Enbridge liquid mainline system this time is 8 minutes.

Maximum Stabilization Loss

The maximum stabilization loss is a worst case calculation of the amount of oil that will escape to ground after isolation has occurred. The calculation takes into consideration the outer diameter and wall thickness of the pipe, the pipeline elevation profile, and the location of remote-controlled valves.

Worst Case Discharge Volume

Worst Case Discharge (WCD) Volume
= Maximum Initial Loss + Maximum Stabilization Loss

Calculation of Worst Case Discharge for Mainline Piping

Line	Capacity (bbls/day)	Time to Isolate (min)	Worst Case Discharge (bbls)	Location (ft Stationing)	Location (MP)
5	529,600	8	24,900	3,322,000	1727.27
6A	656,660	8	30,126	1,337,755	253.36
6B	323,930	8	33,627	1,462,918	742.65
10	69,190	8	4,701	52,506	1938.72
13 Stage 1	180,000	8	37,566	1,597,000	302.46
13 Stage 2	180,000	8	16,350	141,090	26.72
14	387,360	8	19,729	2,281,581	432.12
17	105,930	8	8,954	140,400	26.59
Toledo					
Chicago					
Region					
61 Stage 1	400,000	8	39,525	987,950	187.11
61 Stage 2	400,000	8	33,912	456,050	86.37
62	125,000	8	5,258	395,046	74.82
64	387,360	8	8,013	2,538,095	936.39
(transfer line)					
TL1	317,860	8	3,332	3,024	
(transfer line)					
TL2	363,080	8	2,379	2,713 to 3,913	
(transfer line)					
TL3	363,080	8	2,379	2,713 to 3,913	

Calculation of Worst Case Discharge for Tankage

Prevention Measure	Standard	Credit (percent)
Secondary containment > 100%	NFPA 30	50
Built/repared to API standards	API STD 620/650/653	10
Overfill protection standards	API RP 2350	5
Testing/cathodic protection	API STD 650/651/653	5
Tertiary containment/drainage/treatment	NFPA 30	5
Maximum allowable credit		75

25% of largest tank in Chicago Region = 390,000 x 25% (75% RSPA credit) = 97,500 bbls



5. Identification of Environmentally Sensitive Areas

Enbridge utilizes the criteria described in its integrity management plan (HCA Management Plan) to identify and evaluate varying degrees of sensitivity to a number of public safety and environmental concerns along its right-of-way.

Spatial data regarding the HCA sites were derived from the National Pipeline Mapping System (NPMS) database maintained by PHMSA and mapped using the Geographic Information System (GIS) software ESRI (Environmental Systems Research Institute) ArcMap. In addition to the HCA's identified by PHMSA, Enbridge considered the following features in its Unusually Sensitive Area assessment:

- Rivers identified as high volume areas
- Additional drinking water resources
- Environmentally sensitive areas identified through regional or field knowledge

In addition, HCA's were identified that may be affected by a release from Enbridge pipelines via transport mechanisms. The types of transport mechanisms considered were:

- Overland flow of crude oil to an HCA which is a function of topographic gradients, locations of ditches, and barriers to flow, in addition to stationing-specific volumes of crude oil that could be potentially released from an Enbridge pipeline.
- Flow of crude oil with/on water to an HCA from static lakes and ponds or perennial streams
- Spray of crude oil from a potential rupture to an HCA

The Enbridge HCA maps are an integral part of Enbridge emergency planning and response and are distributed to the Enbridge Regional Offices. The HCA maps are available upon request.



6. Basis for Determination of “Significant and Substantial Harm”

Enbridge has determined that the Chicago Response Zone meets the criteria that requires the zone to be considered as having the potential to cause “significant and substantial” harm.